

Office of Spectrum Policy and Management, ASR-1 October 1999 Volume 1, Issue 3

## Airborne Support Provided to the Southwest Region to Resolve Radio Frequency Interference (RFI) -

Personnel from ASR coordinated airborne support with the FAA's Technical Center to resolve an RFI problem affecting the Houston Center's air/ground communications frequency 134.8 MHz. The RFI problem was a loud intermittent static noise that was being heard and reported by pilots. During the week of August 30th, two engineers from the Communication/ Infrastructure Branch. ACT-330, flew aboard a Technical Center aircraft and were able to pinpoint the source of the interference to an antenna located on top of a water tower in Bertram, Texas. This information was provided to the Southwest Region frequency management personnel, who in turn identified the antenna as that of a paging system belonging to Highland Communications, Inc. After conducting an on/off test to positively identify the source of the interference, the company determined they had a defective transmitter and agreed to take it out of service and fix the transmitter. No complaints of interference have been received since the transmitter was taken out of service.

## Office of Spectrum Policy and Management (ASR), Participates in Safe Flight 21 Meeting - ASR

participated in the joint Federal Aviation Administration/EUROCONTROL meeting from August 24 to August 26 at EUROCONTROL in Bretigny, France. The meeting addressed issues associated with evaluating the three links proposed for automatic dependence surveillance broadcast (ADS-B). The three candidates are the Mode-S extended squitter, the universal access transceiver (UAT), and the very high frequency digital link mode-4 (VDL-4). ASR briefed the group on spectrum issues associated with each of the links (e.g., bandwidth protection). Other issues addressed at the meeting include the progress of the Cargo Airline Association evaluation of the three links in the Ohio Valley and the Alaska CAPSTONE program which is testing UAT. ASR will continue to stay involved in the further development of these ADS-B systems so that all spectrum issues are addressed and considered in the final selection of the future ADS-B link.



### Frequency Support Continues for the National Interagency Fire Center

 Personnel from ASR and the Western-Pacific regional frequency management office continue providing frequency support to the Department of Agriculture's National Interagency Fire Center. In order to help in combating the wildfires in western Nevada and eastern California 30 additional VHF air/ground communications frequencies have been engineered and provided to the Fire Center's Incident Communications Support Unit since the beginning of August. We will continue to provide around the clock frequency assignment/engineering support until the fire season is over.

#### Global Positioning System (GPS) Radio Frequency Interference (RFI) Detection Program Discussed with the Satellite Operation

Implementation Team (SOIT) - ASR presented the final plan that laid out the path to obtaining enhanced GPS RFI investigation readiness by the Wide Area Augmentation System Initial Operational Capability at the SOIT conference held in Virginia from August 16 to August 20. This final plan assesses the existing Airway Facilities RFI investigation tools and equipment available in the National Airspace System today and proposes a number of enhancements needed for such equipment. One of the enhancements is to establish a national fixed direction finding test bed in Chicago, Atlantic City, Los Angeles, and Washington, DC.



# Arrangements for the Replacement of the New England Region Damaged Radio Frequency Interference (RFI) Van - The New

England Region's damaged RFI van is scheduled to be replaced with a second van, which was scheduled to be delivered to the Northwest Mountain Region. The tentative delivery date is for December 7, of this year. In order to salvage some of the vans equipment, that is still in working condition, arrangements have been made to transport the damaged van to the William J. Hughes Technical Center in Atlantic City, New Jersey.



International Civil Aviation
Organization (ICAO) Global
Navigation Satellite System Panel

(GNSSP) positions on proposed new Global Positioning System (GPS) signal – ASR led the United States (U.S.) efforts at the October 18, Toulouse, France meeting of the GNSSP spectrum subgroup. The purpose of the meeting was to develop inputs for an ICAO position on a proposed new civil GPS signal in the 1164-1188 MHz band. Though faced with considerable opposition from European proponents of Galileo, a proposed competing satellite navigation system, ASR personnel were able to successfully obtain GNSSP support for the U.S. request. The suggested position accommodates GPS while retaining priority for existing aeronautical users of the band (e.g., distance measuring equipment). It also provides opportunities for a similar aviation signal for Galileo, which should increase international support for the frequency allocation at the World Radio Conference 2000. ASR will continue to work within ICAO to ensure that the needs of U.S. civil aviation are accommodated in further development of GNSS.



**Conference:** Personnel from the Office of Spectrum Policy and Management (ASR), participated in the APEC Conference being held in Lima, Peru. ASR promoted spectrum protection for the existing Global Positioning System (GPS) radio signal L1 and the international adoption of the new GPS aviation signal L5. In addition, we provided information on the United States (U.S.) national spectrum management policy and other international spectrum related efforts at the APEC satellite navigation display; sponsored by the Department of State, Air Traffic Association, National Aeronautical Space Administration and the U.S. Coast Guard.

**ASR-100 Participates in the First Navigational Aids Signal Evaluator** (NASE) Radio Frequency Interference (RFI) Re-evaluation **Meeting -** Personnel from the Office of Spectrum Policy and Management participated in the NASE/RFI reevaluation meeting at the Mike Monroney Aeronautical Center in Oklahoma City. This new effort is under way to create a team to reevaluate the NASE/RFI program and begin a transition for use of the existing Beech Super King-300 as the platform for pre-engineering evaluations and interference investigations. Initial transition spectrum engineering requirements were provided to Flight Inspection. One Beech 300 will be modified and used as a test bed. If successful other Federal Aviation Administration owned

Frequency Support Provided for the Egypt Air Crash Family Assistance

Super King 300's would be modified

as well.

**Center -** The National Transportation Safety Board, NTSB, requested that the Federal Aviation Administration support Health and Human Services (HHS) in communications between base stations and vehicles for transporting family members of the victims of the crash. Personnel from the Spectrum Assignment and Engineering Division, ASR-100, coordinated the use of the frequencies 165.750MHz, 166.175MHz, 169.350MHz, 172.125MHz, 172.175MHz for base to vehicles and 169.225MHz paired with 172.825MHz for wide area repeater coverage in and around Quonset Point, Rhode Island. These frequencies were coordinated with the Emergency Operations Staff, ADA-20, New England

Region Operations Center, ANE-6, and Airway Facilities Division, ANE-400. These frequencies are part of the Recovery Communications Program group of frequencies used in the New England Region.

Airborne Support Provided to the Southern Region to Resolve Radio Frequency Interference (RFI) -

Personnel from the Office of Spectrum Policy and Management, ASR, Southern Region, ASO, and Aviation Systems Standards, AVN, coordinated airborne support to resolve an RFI problem affecting the Atlanta and Jacksonville Center's air/ground communications frequencies 134.95MHz and 134.975MHz. Two engineers from the Operations Branch, ASO-470, traced the source of the interference to an antenna located on top of Paris Mountain. South Carolina. They identified the antenna to be a paging system belonging to the Spartanburg Memorial Hospital. After conducting an on/off test they positively identified this paging system as the source of the RFI. The hospital determined that they had a defective transmitter radiating spurious signals into our air ground communications receivers and agreed to take it out of service for repair. No complaints of interference have been received since the transmitter was taken out of service and repaired.

Office of Spectrum Policy and Management (ASR), Participates in Meeting of International Civil Aviation Organization (ICAO) Radio Spectrum Experts - A representative from ASR participated in a meeting of the ICAO Working Group F which addresses aeronautical radio spectrum issues. Of particular importance was the finalization of the ICAO position for the International Telecommunication Union World Radio Communication Conference (WRC-2000). The first two days of the Working Group F Conference were a Western and Central African Regional Coordination Meeting to prepare for WRC-2000. The ASR representative briefed this group on the importance of the Global Navigation

Satellite System (GNSS), to their economies and on the importance of protecting GNSS radio spectrum from interference as well as other users. ASR will continue its aggressive effort to further these, and other, aeronautical radio spectrum issues in the international community.

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